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EXAMINER

DANIEL JR, WILLIE J

ART UNIT	PAPER NUMBER
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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/909,039

Applicant(s)

MAKINEN ET AL.

Examiner

Willie J. Daniel, Jr.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-30 and 33-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-30 and 33-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to applicant's RCE amendment filed on 31 October 2007. **Claims 12-30 and 33-55** are now pending in the present application and **claims 1-11 and 31-32** have been canceled. This office action is made **Non-Final**.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 31 October 2007 has been entered.

Claim Objections

3. **Claim 17** is objected to because of the following informalities:
 - a. Claim 17 recites the limitation "...wherein the **the** decreasing..." in line(s) 1-2 of the claim. The Examiner interprets as --wherein the decreasing-- and suggests replacing said limitation to help clarify the claim language.

Appropriate correction is required.

4. This list of examples is not intended to be exhaustive. The Examiner respectfully requests the applicant to review all claims and clarify the issues as listed above as well as any other issue(s) that are not listed.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 38, 44, 48, and 52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. **Claims 38, 44, 48, and 52** include the limitation "...a pseudo error defining an instant...limit value..." as recited in line(s) 3-5 of claim 38. The claims fail to provide claim language fully defining "pseudo error". For example, the language "so that an actual error did not occur" was omitted from the claim language (see claims 12, 24, 27-30, and 33-37; instant application pg. 3, line(s) 13 et seq.)
- b. **Claims 38, 44, 48, and 52** include the limitation "...power...is decreased...**above** a predetermined level...is increased... **above** a predetermined level..." as recited in line(s) 10-12 of claim 38. The Examiner requests clarification as to whether or not one of the limitation terms "...**above**..." should be the term "...**below**...".
- c. **Claims 38, 44, 48, and 52** include the limitation "...a first unit...second unit..." as recited in line(s) 2-8 of claim 38. The Examiner requests clarification as to whether or not the limitation "...first unit...second unit..." are the **same** "...first unit...second unit..." of claim 24.

Regarding **claims 38, 44, 48, and 52**, the claims recite language that is not clear and concise in which the Examiner respectfully request the applicant to clarify the claims. If the applicant considers the current language to be sufficient, the Examiner respectfully requests

Art Unit: 2617

page(s), line(s), and/or drawing(s) of the instant application that supports the claim language and any supportive comment(s) to help clarify and resolve this issue(s).

6. Due to the current claim language, the Examiner has given a reasonable interpretation of said language and the claims are rejected as broadest and best interpreted. In addition, applicant is welcomed to point out where in the specification the Examiner can find support for this language if Applicant believes otherwise.
7. This list of examples is not intended to be exhaustive. The Examiner respectfully requests the applicant to review all claims and clarify the issues as listed above as well as any other issue(s) that are not listed.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 12-17, 19, 24, 27-30, 33-34, 36-38, and 41-55, are rejected under 35 U.S.C. 102(a) as being anticipated by **Vembu (US 6,259,928 B1)**.

Regarding **claims 12, 29-30, and 33-34**, Vembu discloses a method (see col. 3, line 65 - col. 4, line 2), comprising:

transmitting a digital signal from a transmitting end (104a-b) to a receiving end (104a-b) of a radio system (e.g., communication system 100) (see col. 4, lines 14-22, 27-32; Fig. 1);

receiving said digital signal at the receiving end (104a-b) (see col. 4, lines 14-22,27-32; Fig. 1);

setting an initial value of the transmission power so that no pseudo errors (inherent) are detected (see col. 3, lines 27-29), where the signal quality is high in which “no pseudo errors” would be inherent as evidenced by the fact that one of ordinary skill in the art would clearly recognize,

wherein a pseudo error (inherent) is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur (see col. 7, lines 8-12,40-44; col. 10, lines 54-59), where the system has an acceptable range of values that allow an error to occur without any system adjustments in which pseudo errors would be inherent and when errors fall outside the acceptable range an error is detected for system adjustments as evidenced by the fact that one of ordinary skill in the art would clearly recognize;

monitoring pseudo error (inherent) occurrence in the received signal at the receiving end (104a-b) (see col. 7, lines 8-16,40-44; col. 10, lines 54-59; col. 8, lines 5-10);

decreasing the transmission power gradually from the initial value at the transmission end (104a-b) when the pseudo error (inherent) occurrence in an error-free reception does not fulfill a predetermined condition (see col. 7, lines 4-7; col. 5, line 66 - col. 6, line 2); and

increasing the transmission power by a predetermined amount when the pseudo error (inherent) occurrence in the error-free reception fulfills the predetermined condition (see col. 5, lines 41-44,63-65).

Regarding **claim 13**, Vembu discloses the method as claimed in claim 12, further comprising: fulfilling the predetermined condition by detecting the pseudo error (see col. 7, lines 8-12,40-44; col. 10, lines 54-59), where the system has an acceptable range of values that allow an error to occur without any system adjustments in which pseudo errors would be inherent and when errors fall outside the acceptable range an error is detected for system adjustments as evidenced by the fact that one of ordinary skill in the art would clearly recognize.

Regarding **claim 14**, Vembu discloses the method as claimed in claim 12, further comprising: fulfilling the predetermined condition by detecting a second pseudo error within a predetermined time interval after the last pseudo error (see col. 5, lines 33-40).

Regarding **claim 15**, Vembu discloses the method as claimed in claim 12, further comprising: fulfilling the predetermined condition by detecting a predetermined number of pseudo errors within a predetermined time interval (see col. 5, lines 33-40; col. 7, lines 8-12,40-44; col. 10, lines 54-59), where the system has an acceptable range of values that allow an error to occur without any system adjustments in which pseudo errors would be inherent and when errors fall outside the acceptable range an error is detected for system adjustments as evidenced by the fact that one of ordinary skill in the art would clearly recognize.

Regarding **claim 16**, Vembu discloses the method as claimed in claim 12, further comprising: increasing the transmission power immediately when the pseudo error is detected (see col. 5, lines 41-44,63-65).

Regarding **claim 17**, Vembu discloses the method as claimed in claim 12, wherein the decreasing the transmission power comprising decreasing the transmission power in

Art Unit: 2617

predetermined steps for a predetermined time period at each step (see col. 7, lines 4-7; col. 5, line 66 - col. 6, line 2).

Regarding **claim 19**, Vembu discloses the method as claimed in claim 12, further comprises:

adjusting the transmission power after the set-up of the radio system to the initial value high enough so that no pseudo errors are detected at the receiving end (see col. 7, lines 8-12,40-44; col. 10, lines 54-59), where the system has an acceptable range of values that allow an error to occur without any system adjustments in which pseudo errors would be inherent and when errors fall outside the acceptable range an error is detected for system adjustments as evidenced by the fact that one of ordinary skill in the art would clearly recognize;

decreasing the transmission power until a first pseudo error is detected (see col. 7, lines 4-7; col. 5, line 66 - col. 6, line 2);

increasing the transmission power in response to the detected pseudo error (see col. 5, lines 41-44,63-65); and

jumping to the decreasing the transmission power until the first pseudo error is detected when no pseudo errors are detected during a predetermined time period after the transmission power has been increased in the increasing the transmission power in response to the detected error (see col. 7, lines 8-16,40-44; col. 10, lines 54-59).

Regarding **claims 24, 27-28, and 37**, Vembu discloses a radio system (e.g., communication system 100) (see col. 3, line 65 - col. 4, line 2; col. 4, lines 14-22,27-32; Fig. 1), comprising:

at a receiving end (104a-b), a first unit configured to monitor pseudo error occurrence in a received signal and to produce a control signal indicating when pseudo errors are detected and when the pseudo error occurrence in an error-free reception is below a predetermined condition (see col. 7, lines 8-16,40-44; col. 10, lines 54-59; col. 8, lines 5-10; Fig. 1),

wherein a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur (see col. 7, lines 8-12,40-44; col. 10, lines 54-59), where the system has an acceptable range of values that allow an error to occur without any system adjustments in which pseudo errors would be inherent and when errors fall outside the acceptable range an error is detected for system adjustments as evidenced by the fact that one of ordinary skill in the art would clearly recognize, and

at a transmitting end (104a-b), a second unit configured to adjust transmission power responsive to said control signal by decreasing the transmission power when the pseudo error occurrence in the error-free reception does not fulfill the predetermined condition and by increasing the transmission power when the pseudo error occurrence fulfills the predetermined condition (see col. 7, lines 4-7; col. 5, line 66 - col. 6, line 2; col. 5, lines 41-44,63-65; col. 8, lines 5-10).

Regarding **claim 36**, Vembu discloses a method (see col. 3, line 65 - col. 4, line 2), comprising:

transmitting a digital signal from a transmitting end (104a-b) to a receiving end (104a-b) of a radio system (e.g., communication system 100) (see col. 4, lines 14-22,27-32; Fig. 1);

receiving said digital signal at the receiving end (104a-b) (see col. 4, lines 14-22,27-32; Fig. 1);

setting an initial value of the transmission power so that no pseudo errors (inherent) are detected (see col. 3, lines 27-29), where the signal quality is high in which “no pseudo errors” would be inherent as evidenced by the fact that one of ordinary skill in the art would clearly recognize,

wherein a pseudo error (inherent) is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur (see col. 7, lines 8-12,40-44; col. 10, lines 54-59), where the system has an acceptable range of values that allow an error to occur without any system adjustments in which pseudo errors would be inherent and when errors fall outside the acceptable range an error is detected for system adjustments as evidenced by the fact that one of ordinary skill in the art would clearly recognize;

monitoring pseudo error (inherent) occurrence in the received signal at the receiving end (104a-b) (see col. 7, lines 8-16,40-44; col. 10, lines 54-59; col. 8, lines 5-10);

decreasing the transmission power gradually from the initial value at the transmission end (104a-b) when the pseudo error (inherent) occurrence in an error-free reception does not fulfill a predetermined condition (see col. 7, lines 4-7; col. 5, line 66 - col. 6, line 2); and

increasing the transmission power by a predetermined amount when the pseudo error (inherent) occurrence in the error-free reception fulfills the predetermined condition (see col. 5, lines 41-44,63-65);

Art Unit: 2617

monitoring the rate of actual errors at the receiving end (see col. 7, lines 8-16,40-62; col. 10, lines 54-59; col. 8, lines 5-10); and

overriding transmission power control based on monitoring of occurrence of pseudo errors by increasing transmission power when actual errors are observed (see col. 5, lines 41-44,63-65), where the power is increased when errors are detected beyond the acceptable range.

Regarding **claims 38, 44, 48, and 52**, Vembu discloses an apparatus (see col. 3, line 65 - col. 4, line 2; col. 4, lines 14-22,27-32; Fig. 1), where the transceivers (104a-b) exchange data in communication system (100), comprising:

a first unit configured to monitor pseudo error occurrence in transmissions received from a transmitting end (see col. 7, lines 8-16,40-62; col. 10, lines 54-59; col. 8, lines 5-10),

a pseudo error defining an instant when a right bit or symbol decision is made but a margin for the right bit or symbol decision was smaller than a limit value (see col. 7, lines 8-12,40-44; col. 10, lines 54-59), where the system has an acceptable range of values that allow an error to occur without any system adjustments in which pseudo errors would be inherent and when errors fall outside the acceptable range an error is detected for system adjustments as evidenced by the fact that one of ordinary skill in the art would clearly recognize, and

to produce a control signal indicating whether a pseudo error has been detected (see col. 7, lines 8-16,40-44; col. 10, lines 54-59; col. 8, lines 5-10; Fig. 1), and

a second unit configured to generate power control messages based on control signals received from said first unit, which power control messages are to be transmitted to said transmitted end (see col. 8, lines 5-10), and

Art Unit: 2617

wherein the power control messages are generated such that transmission power at said transmitting end is decreased until the pseudo error occurrence is above a predetermined level (see col. 7, lines 4-7; col. 5, line 66 - col. 6, line 2), and

is increased when the pseudo error occurrence is above the predetermined level (see col. 7, lines 4-7; col. 5, line 66 - col. 6, line 2; col. 5, lines 41-44, 63-65; col. 8, lines 5-10).

Regarding **claims 41-43**, the claims as applied to claim 38 are rejected for the same reasons as set forth above in **claims 13-15**, respectively.

Regarding **claims 45-47**, the claims as applied to claim 44 are rejected for the same reasons as set forth above in **claims 13-15**, respectively.

Regarding **claims 49-51**, the claims as applied to claim 48 are rejected for the same reasons as set forth above in **claims 13-15**, respectively.

Regarding **claims 53-55**, the claims as applied to claim 52 are rejected for the same reasons as set forth above in **claims 13-15**, respectively.

Art Unit: 2617

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 38, 44, 48, and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by **Endo et al.** (hereinafter **Endo**) (**EP 0 847 146 A2**).

Regarding **claims 38, 44, 48, and 52**, Endo discloses an apparatus (see col. 11, line(s) 10-19; Fig. 1), where mobile terminal (202) communicates with radio base station (201) in radio area L1, comprising:

a first unit configured to monitor the occurrence of pseudo errors in transmissions received from a transmitting end, a pseudo error defining an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value, and to produce a control signal indicating whether a pseudo error has been detected (see col. 11, lines 20-34; col. 12, line 56 - col. 13, line 13; col. 13, line 35 - col. 15, line 13; Figs. 3-6), and

a second unit configured to generate power control messages based on control signals received from said first unit, which power control messages are to be transmitted to said transmitting end, and wherein the power control messages are generated such that transmission power at said transmitting end is decreased until the pseudo error occurrence is above a predetermined level, and is increased when the pseudo error occurrence is above the predetermined level (see col. 12, lines 44-47; col. 12, line 56 - col. 13, line 13; col. 13, line 35 - col. 15, line 13; Figs. 3-6).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Vembu (US 6,259,928 B1)** in view of **Nakano et al. (hereinafter Nakano) (US 5,873,028)**.

Regarding **claim 18**, Vembu discloses every limitation claimed as applied above in claim 17. Endo does not specifically disclose having the feature configuring the predetermined step to be 1 dB. However, the examiner maintains that the feature configuring the predetermined step to be 1 dB was well known in the art, as taught by Nakano.

In the same field of endeavor, Nakano at the least discloses the feature configuring the predetermined step to be 1 dB (see col. 6, lines 25-41; col. 7, lines 38-43; col. 5, lines 13-24; Fig. 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vembu and Nakano to have the feature wherein a predetermined step is 1 dB, in order to suppress power to a minimum level while satisfying the required communication quality, as taught by Nakano (see col. 8, lines 51-58; col. 9, lines 55-60; col. 10, lines 31-37; col. 1, lines 14-16).

Regarding **claim 20**, Vembu discloses every limitation claimed as applied above in claim 12. Endo does not specifically disclose having the feature wherein the predetermined amount for increasing the transmission power is 1 or 2 dB. However, the examiner maintains

that the feature wherein the predetermined amount for increasing the transmission power is 1 or 2 dB was well known in the art, as taught by Nakano.

Nakano further discloses the feature wherein the predetermined amount for increasing the transmission power is 1 or 2 dB (see col. 6, lines 25-41; col. 7, lines 38-43; col. 5, lines 13-24; Fig. 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vembu and Nakano to have the feature wherein the predetermined amount for increasing the transmission power is 1 or 2 dB, in order to suppress power to a minimum level while satisfying the required communication quality, as taught by Nakano (see col. 8, lines 51-58; col. 9, lines 55-60; col. 10, lines 31-37; col. 1, lines 14-16).

Claims 21-22, 25-26, and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Vembu (US 6,259,928 B1)** in view of **Mallinckrodt (US 5,878,329)**.

Regarding **claim 21**, Vembu as applied to claim 12 teaches of decoding the signal at the receiving end (104a-b) (see col. 4, lines 27-32; col. 7, lines 59-62; Fig. 1), where the system has a modulated signal in which the signal would have to be demodulated (or decoded). Vembu does not specifically disclose having the feature(s) using forward error correction in the transmitted signal; decoding the signal at the receiving end by means of a forward error correction decoder; and interpreting the corrections made by the forward error correction decoder as pseudo errors. However, the examiner maintains the feature(s) using forward error correction in the transmitted signal; decoding the signal at the receiving end by

means of a forward error correction decoder; and interpreting the corrections made by the forward error correction decoder as pseudo errors was well known in the art, as taught by Mallinckrodt.

In the same field of endeavor, Mallinckrodt teaches of using forward error correction (FEC) in the transmitted signal (see abstract; col. 9, lines 7-41; col. 11, lines 1-21; col. 12, lines 20-35; Figs. 7 and 9), decoding the signal at the receiving end by means of a FEC decoder (156) (see abstract; col. 9, lines 7-41; col. 11, lines 1-21; col. 12, lines 20-35; Figs. 7 and 9), and interpreting the corrections made by the decoder as pseudo errors (see abstract; col. 9, lines 7-41; col. 11, lines 1-21; col. 12, lines 20-35; Figs. 7 and 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vembu and Mallinckrodt to have the feature(s) using forward error correction in the transmitted signal; decoding the signal at the receiving end by means of a forward error correction decoder; and interpreting the corrections made by the forward error correction decoder as pseudo errors, in order to correct errors of a received signal and to have power efficiency by minimizing power transmitted from a source to a user, as taught by Mallinckrodt (see col. 12, line 20-35; col. 13, lines 33-40).

Regarding **claim 22**, Vembu as applied to claim 12 discloses the feature(s) using at the receiving end (104a-b) a demodulator provided with a first set of thresholds and a second set of thresholds for making a decision on whether the pseudo error has occurred (see col. 4, lines 27-32; col. 7, lines 59-62; Fig. 1), where the system has a modulated signal in which the

Art Unit: 2617

signal would have to be demodulated (or decoded). Vembu does not specifically disclose the feature making a decision on a received symbol. However, the examiner maintains that the feature making a decision on a received symbol was well known in the art, as taught by Mallinckrodt.

Mallinckrodt further discloses the feature making a decision on a received symbol (see col. 9, lines 35-38; 50-56; Fig. 7), where the symbol detector (152) detects the symbol errors to be interpreted to adjust the power.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vembu and Mallinckrodt to have the feature making a decision on a received symbol, in order to correct errors of a received signal and to have power efficiency by minimizing power transmitted from a source to a user, as taught by Mallinckrodt (see col. 12, line 20-35; col. 13, lines 33-40).

Regarding **claim 25**, Vembu as applied claim 24 discloses the feature(s) wherein said first unit (104a-b) includes a decoder configured to decode a coded signal and configured to detect pseudo errors (see col. 4, lines 27-32; col. 7, lines 59-62; Fig. 1), where the system has a modulated signal in which the signal would have to be demodulated (or decoded). Vembu does not specifically disclose having the feature(s) a forward error correction decoder configured to decode a forward error correction coded signal. However, the examiner maintains that the feature(s) a forward error correction decoder configured to decode a forward error correction coded signal was well known in the art, as taught by Mallinckrodt.

Mallinckrodt further discloses the feature(s) a forward error correction decoder (156) configured to decode a forward error correction coded signal (see abstract; col. 9, lines 7-41;

Art Unit: 2617

col. 11, lines 1-21; col. 12, lines 20-35; Figs. 7 and 9), where the FEC decoder decodes the received signal according to the forward error correction to adjust the power.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vembu and Mallinckrodt to have the feature(s) a forward error correction decoder configured to decode a forward error correction coded signal, in order to correct errors of a received signal and to have power efficiency by minimizing power transmitted from a source to a user, as taught by Mallinckrodt (see col. 12, line 20-35; col. 13, lines 33-40).

Regarding **claim 26**, Vembu as applied to claim 24 discloses the feature(s) wherein said first unit (104a-b) include a demodulator provided with a first set of thresholds and a second set of thresholds for making a decision on whether the pseudo error has occurred (see col. 4, lines 27-32; col. 7, lines 59-62; Fig. 1), where the system has a modulated signal in which the signal would have to be demodulated (or decoded). Endo does not specifically disclose the feature making a decision on a received symbol. However, the examiner maintains that the feature making a decision on a received symbol was well known in the art, as taught by Mallinckrodt.

Mallinckrodt further discloses the feature making a decision on a received symbol (see col. 9, lines 35-38; 50-56; Fig. 7), where the symbol detector (152) detects the symbol errors to be interpreted to adjust the power.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Endo and Mallinckrodt to have the feature making a decision on a received symbol, in order to correct errors of a received signal

Art Unit: 2617

and to have power efficiency by minimizing power transmitted from a source to a user, as taught by Mallinckrodt (see col. 12, line 20-35; col. 13, lines 33-40).

Regarding **claims 39-40**, the claims as applied to claim 38 are rejected for the same reasons as set forth above in **claims 25-26**, respectively.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Vembu (US 6,259,928 B1)** in view of **Endo et al. (hereinafter Endo) (EP 0 847 146 A2)**.

Regarding **claim 23**, Vembu discloses the method as claimed in claim 12, further comprising:

monitoring the rate of actual errors at the receiving end (see col. 7, lines 8-16,40-62; col. 10, lines 54-59; col. 8, lines 5-10); and

increasing the transmission power temporarily to the transmission power when a predetermined error rate threshold is exceeded (see col. 6, lines 35-45), where the system is operating at an excess in transmitter power. Vembu does not specifically disclose having the feature(s) increasing the transmission power temporarily to the maximum transmission power. However, the examiner maintains that the feature(s) increasing the transmission power temporarily to the maximum transmission power was well known in the art, as taught by Endo.

In the same field of endeavor, Endo discloses the feature(s) increasing the transmission power temporarily to the maximum transmission power (see col. 13, lines 13-44; Figs. 3 “303” and 4), where the error rate exceeds the threshold and power is maximum in which the power is at maximum until adjusted to a favorable level.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vembu and Endo to have the feature(s) increasing the transmission power temporarily to the maximum transmission power, in order to provide a transmission power control apparatus of a mobile communication system, as taught by Endo (see col. 3, lines 36-46).

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Vembu (US 6,259,928 B1)** in view of **Tiedemann et al. (hereinafter Tiedemann) (US 5,822,318)**.

Regarding **claim 35**, Vembu discloses a decoder for a radio link system (see Figs. 1-2), the decoder (102) comprising:

wherein the error signal provides information for producing a control signal, the control signal indicating whether pseudo errors are detected in a received signal and whether the pseudo error occurrence in an error-free reception fulfills a predetermined condition, a pseudo error defining an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur (see col. 7, lines 8-16,40-62; col. 10, lines 54-59; col. 8, lines 5-10). Vembu does not specifically disclose having the features a first output for outputting a corrected bit stream, wherein the corrected bit stream is obtained by removing redundancy from a received bit stream; and a second output for outputting an error signal indicating corrections made by the forward error correction decoder to obtain the corrected bit stream. However, the examiner maintains that the features a first output for outputting a corrected bit stream, wherein the corrected bit stream is obtained by removing redundancy from a received bit

stream; and a second output for outputting an error signal indicating corrections made by the forward error correction decoder to obtain the corrected bit stream was well known in the art, as taught by Tiedemann.

In the same field of endeavor, Tiedemann discloses the features a first output for outputting a corrected bit stream, wherein the corrected bit stream is obtained by removing redundancy from a received bit stream (see col. 6, lines 59-61; col. 7, lines 7-9,23-29,40-54; col. 5, lines 35-39; Fig. 3), where two outputs is provided by the decoder (56); and

a second output for outputting an error signal indicating corrections made by the forward error correction decoder (56) to obtain the corrected bit stream (see col. 6; lines 59-61; col. 7, lines 7-9,23-29,40-54; col. 5, lines 35-39; Fig. 3), where two outputs is provided by the decoder (56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vembu and Tiedemann to have the feature a first output for outputting a corrected bit stream, wherein the corrected bit stream is obtained by removing redundancy from a received bit stream; and a second output for outputting an error signal indicating corrections made by the forward error correction decoder to obtain the corrected bit stream, in order to provide timely power control that is necessary to provide robust communication link quality under fast fading conditions, as taught by Tiedemann (see col. 2, lines 49-51).

Allowable Subject Matter

11. The indicated allowability of claims 12-30 and 33-37 are withdrawn in view of the newly discovered reference(s) to Vembu (US 6,259,928 B1). Rejections based on the newly cited reference(s) above.

Response to Arguments

12. Applicant's arguments with respect to claims 12-30 and 33-55 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's arguments, the Examiner respectfully disagrees as the applied reference(s) provide more than adequate support and to further clarify (see the above claims for relevant citations).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a. Takeuchi et al. (US 6,526,261 B1) discloses a control method of transmitting power in cellular system.
 - b. Saints et al. (US 6,075,974) discloses a method and apparatus for adjusting thresholds and measurements of received signals by anticipating power control commands yet to be executed.
 - c. Love et al. (US 5,940,430)) discloses a method and apparatus for power control in a communication system.

Art Unit: 2617

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (571) 272-7907. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WJD,JR/

WJD,JR
17 January 2008


CHARLES N. APPIAH
SUPERVISORY PATENT EXAMINER